

[2345/103]

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant(s) : Leonid BERESNEV, et al.  
Serial No. : 09/423,948  
Filed : April 14, 2000  
Title : INTERFEROMETER TUNABLE IN A NON-MECHANICAL  
MANNER BY A PANCHARATNAM PHASE  
Art Unit : 2882  
Examiner : George Y. Wang

Commissioner for Patents  
Washington, D.C. 20231

I hereby certify that this correspondence is being transmitted via facsimile to  
number 1-703-746-8832 to the United States Patent and Trademark Office  
and is addressed to: Commissioner for Patents, Washington, D.C. 20231 on

Date: January 23, 2003

Signature: 

Linda M. Shudy (Reg. No. 47,084)

**TRANSMISSION OF MARKED UP COPY OF ABSTRACT  
PER U.S.P.T.O. REPRESENTATIVE'S REQUEST**

Please find a marked up copy of the Abstract transmitted herewith for filing in the  
above-identified patent application.

On January 23, 2003, U.S.P.T.O. Representative Ms. Janice Robertson informed Applicant (via  
Linda M. Shudy, Reg. No. 47,084) that a marked up copy of the Abstract filed on December 30,  
2002 for the above-identified application is desired.

Applicant does not believe that a marked up copy of the Abstract is necessary here (or even  
possible) given the Amendment dated December 30, 2002 containing the new Abstract  
specifically requested that the Abstract provided "replace" the earlier Abstract. Nonetheless,  
Applicant is, at the request of the U.S.P.T.O. today, providing a marked up copy of the Abstract  
herewith -- thus, effectively treating the new Abstract as instead, an amended Abstract.

For clarity's sake, the earlier Abstract of Record (prior to the Amendment filed on December 30, 2002) for the above-identified Application is as follows:

An interferometer is described which does not require a drive mechanism for moving a reference surface or test object in order to tune the interferometer, and which can be tuned in virtually vibration-free manner, thereby preventing measuring errors. The interferometer has at least one light source, a reference surface, a test object and at least one beam splitter. For vibration-free tuning, the interferometer also contains an apparatus for the polarization of the interference beams such that, at the output of the interferometer, they have different polarization states relative to each other. Additionally, an analyzer (is provided), disposed at the output of the interferometer, with a polarization state that is variable in predetermined manner, the analyzer, as a function of its polarization state, introducing a defined Pancharatnam phase into the interference beams for tuning the interferometer.

The new Abstract of Record provided in the Amendment filed on December 30, 2002 for the above-identified Application has been compared with the above earlier Abstract of Record to provide a marked up copy. **That marked up copy of the Abstract is as follows (underlining indicated added text, square-bracketing indicates deleted text, no new matter has been added):**

An improved interferometer [is described] which does not require a drive mechanism for moving a reference surface or test object in order to tune the interferometer, and which can be tuned in virtually vibration-free manner, thereby preventing measuring errors. The interferometer has at least one light source, a reference surface, a test object and [at least one] a beam splitter. For vibration-free tuning, the interferometer [also] may contain[s] an apparatus for the polarization of the interference beams such that, at the output of the interferometer, they have different polarization states relative to each other[. Additionally,] and an analyzer [(is provided)], disposed at the output of the interferometer, with a polarization state that is variable in predetermined manner, the analyzer, as a function of its polarization state, introducing a defined Pancharatnam phase into the interference beams for tuning the interferometer.

No fees are believed due, however, the Commissioner is authorized, as appropriate and/or necessary, to charge any additional fees (including any Rule 136(a) extension fees) or credit any overpayment to Deposit Account No. 11-0600. A duplicate copy of this transmittal letter is enclosed for those purposes.

Dated: January 23, 2003

Respectfully submitted,

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